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A method and device of detecting a molecule, such as DNA or RNA, is provided. The device includes a substrate having an array of at least one biodection site. The biodection site is in contact with an electrical resonator. A biochemical probe is applied to the site and is subsequently interacted with the target biomolecule at the site. The magnetic properties of the biodection site are measured and may be correlated with the presence and quantity of biomolecules at the site. Methods of using the device to detect the presence and determine the quantity of molecules at the site are also provided.